

U.S. Army Training and Doctrine Command

Executive Safety Council

4 Nov 05



TRADOC – Where Tomorrow's Victories Begin

Executive Safety Council Agenda

- **Opening Remarks**
- **Suicides, Suicidal Behaviors and IET Soldiers**
- **Accident Experience Review**
- **Training Related Injuries/Seasonal Health Issues**
- **HMMWV Roll-Over Prevention/Mitigation Initiatives Update**
- **Commanders/Commandants Comment**
- **Closing Comments**



Suicides, Suicidal Behaviors and Initial Entry Training (IET) Soldiers



Purpose

Provide overview of Army enlisted Initial Entry Training (IET) Soldier suicidal behavior, and the actions Training and Doctrine Command (TRADOC) has taken to reduce recruit suicidal behavior and attrition



Agenda

- Psychiatric Recruiting Data
- Behavioral Health Models of Suicidal Behaviors
- Para-suicidal Behavior in IET
- Basic Combat Training (BCT) 24 hour Schedule
- Current Suicide Statistics
- Fixing It: A Beginning



Pre-existing Mental Disorders

- Psychiatric disqualification at the Military Entrance Processing Station is very similar for all services
 - .6%, .7%, .8%, .8% for the Air Force, Army, Navy, Marine respectively

“Psychiatric Hospitalization Rates in New Accessions and Subsequent 6-Month Attrition”—AMSARA (2002)



Data Summary (2004)

Army

- 11% of all total Army waiver requests were for psychiatric conditions
- 1678 total requested psychiatric waivers
 - 40.9% of psychiatric waiver requests (mostly depression and phobias) were approved



Enlistment of Recruits

- Mental health issues not always screened out by recruiters
- Recruits will fail to disclose in order to qualify
- No inexpensive screening tool with adequate predictive validity and reliability to identify high-risk recruits
 - Psychological testing does not accomplish the desired task (takes too long and too expensive)
 - Mental health screening is effective only in detecting the presence of gross deficits



Types of Suicidal Behavior

- Suicidal Ideation
 - Very common (almost pervasive); usually thoughts without action
 - A cause for concern but may not indicate immediate threat
- Suicidal Gestures
 - More serious and less common
 - Signifies a quantum leap from thought to behavior
 - Associated with increased risk for confirmed suicidal behaviors
 - Intent is still variable

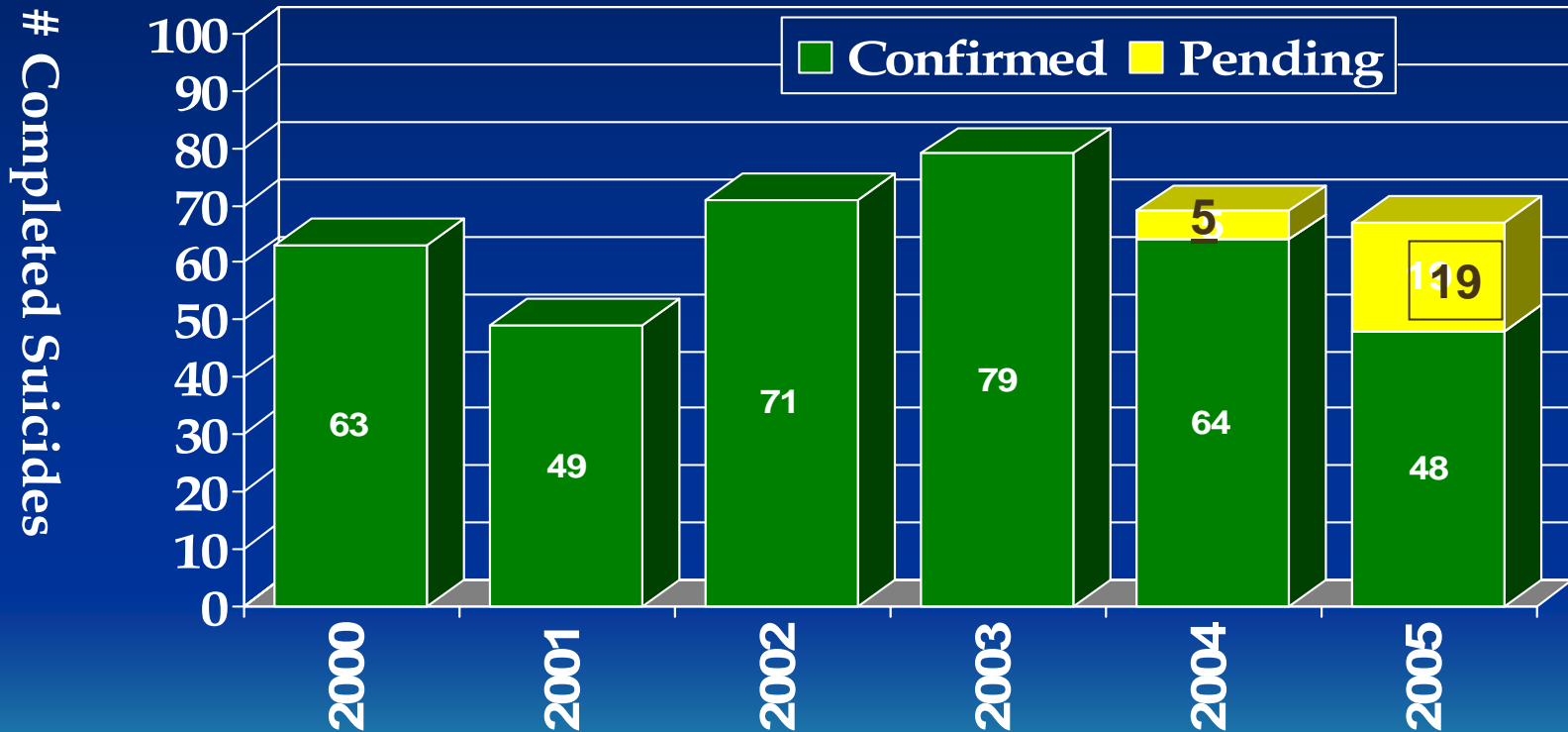


Types of Suicidal Behavior

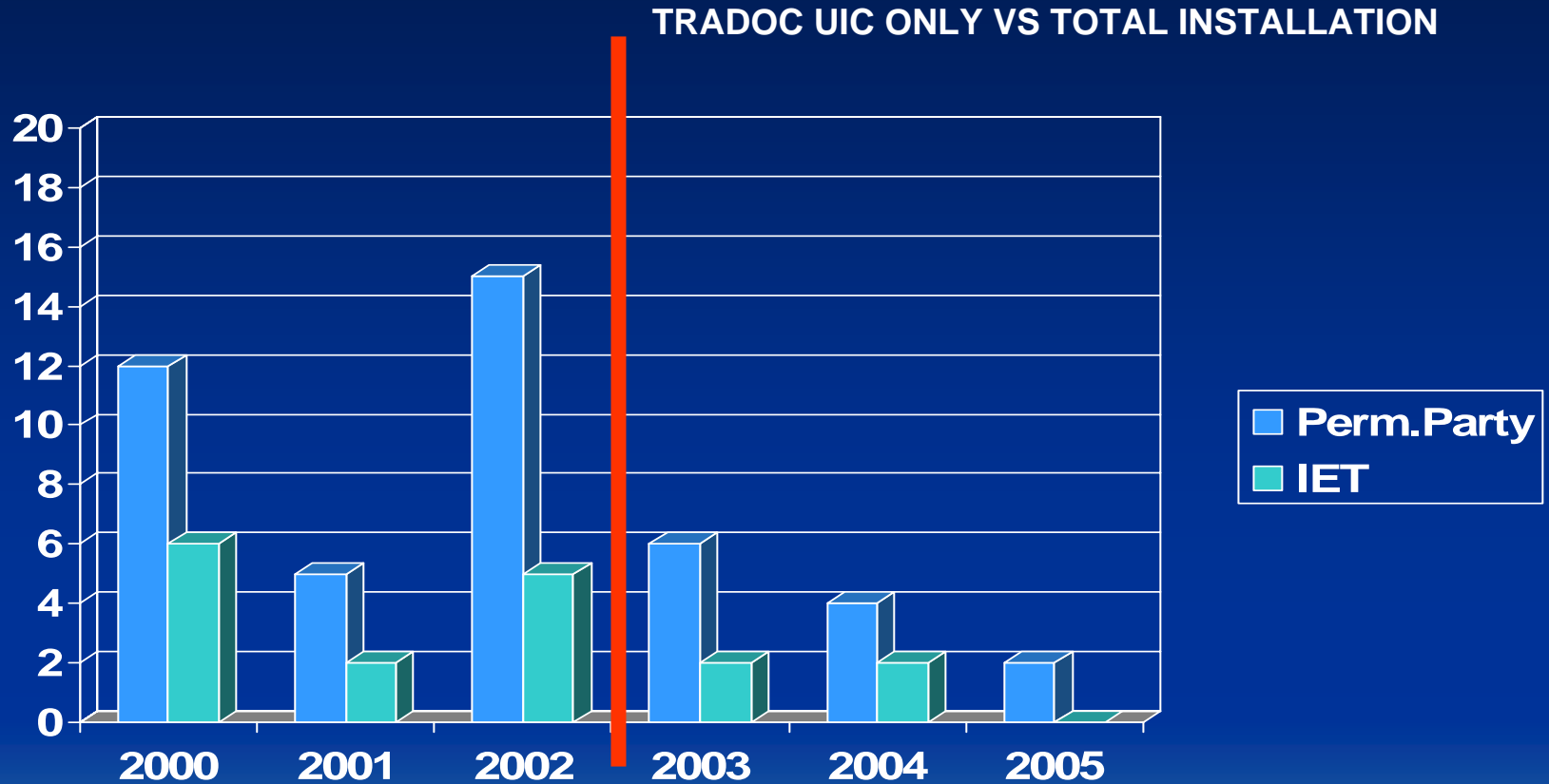
- Suicide Attempts
 - Should always be considered serious
 - Intent is frequently/usually to die
 - Only the intervention of some outside force, lack of knowledge, or problem with planning forestalls death
- Completed Suicide
 - Intervention possible only for family, friends, co-workers, and/or supervisors



Army Active Duty Suicides (Includes USAR / ARNG)



TRADOC Suicides



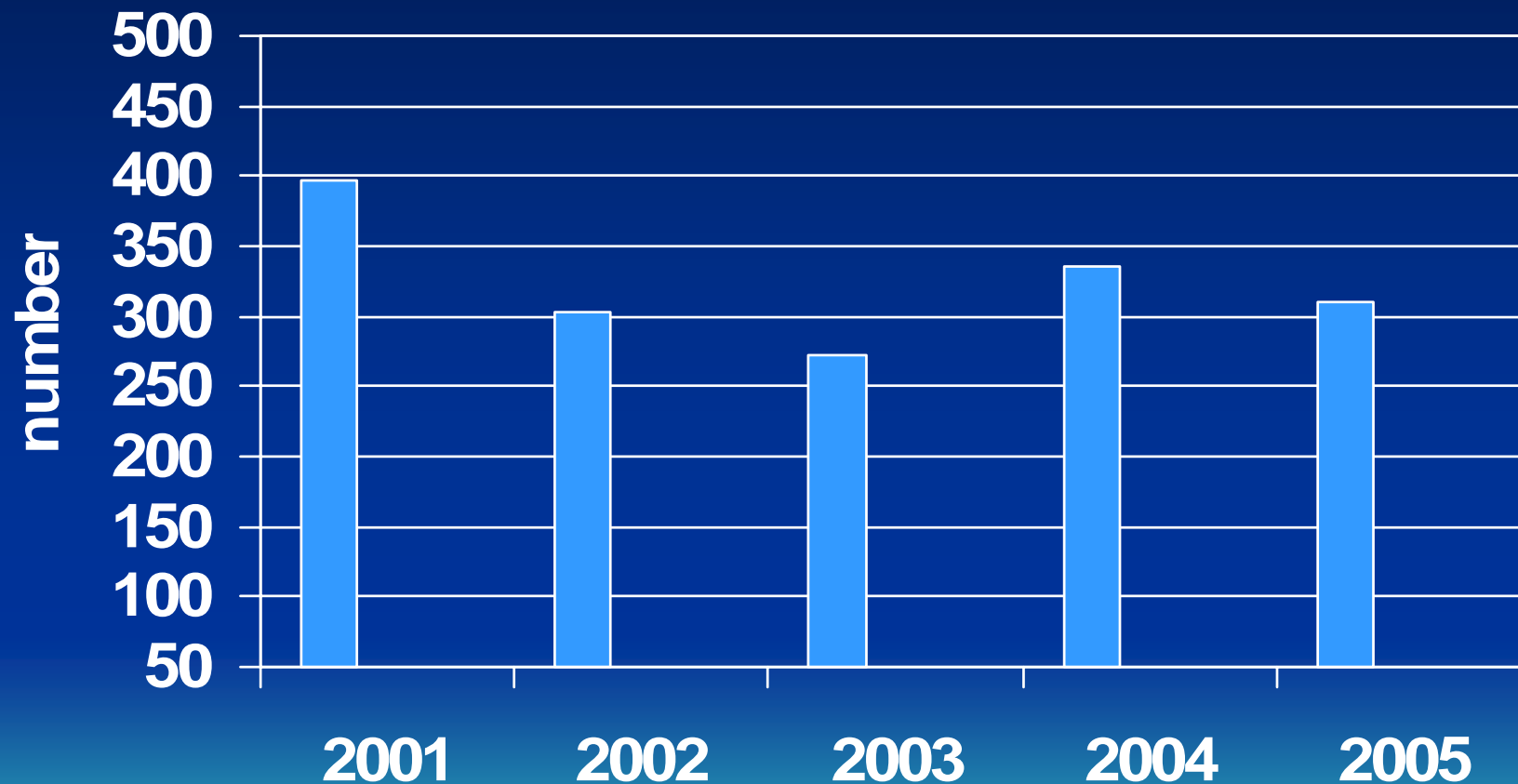
Note: Only 3 of the IET Soldier deaths since 2000 were under direct supervision.

Behavioral Health Models of Suicidal Behavior

- TRUE SUICIDAL BEHAVIOR IS...
 - Normally an impulsive act (even in those instances where considerable planning is evident)
 - Usually a sign of compromised problem-solving skills and/or an inaccurate perception of the situation
 - Often, but not always, associated with some form of psychopathology
 - Associated with a sense of hopelessness
 - Often the result of not being able to identify alternative solutions
 - Can be non-communicative (does not want to die but incapable, unworthy or ignored when attempts to communicate in other ways)

Note: This is not the type of suicidal behavior usually exhibited by IET Soldiers

IET Suicidal Behaviors



2005 data through Sept 30th

Ask Yourself: Of the number of IET suicidal behaviors how many are real?

- Define “real”
- If real = history academic problems, behavioral problems, occupational problems, poor impulse control, previous sexual/physical abuse (which is a risk factor for attrition), extreme entitlement or other maladaptive personality traits, and a high risk for escalating behaviors if retained.....then the vast majority of them are “real”
- If real = actually wants to be **dead** or “would actually injure themselves **if** they had an option to just quit/leave” then **99%+ are “not real”**



Para-suicidal Behaviors

- Para-suicidal behaviors or manipulative suicide attempts (self-destructive behavior without lethal intent)
 - Distinction (difficult)
 - Can be distinguished on the basis of execution
 - Often repetitious
 - Under circumstances where rescue is likely
 - Seem designed to exact some specific response- usually from another person

Gunderson, Kolb and Austin 1981



IET Soldiers “Para-suicidal” Behaviors

- Unhappiness with the Army and separation from home
 - Failed Adjustment to the Army
 - Relationships lost
 - Conflict with peers/NCOs
 - Legal problems
 - Recent frustrations/ disappointment (PT failure; marksmanship failure; threat of “recycling”)
- Initial Entry Training environment generally perceived by many trainees as distressing
- Proclivity of the young & immature is to run away from stress (AWOL, intoxication, misbehaviors/acting out & SUICIDAL behaviors)



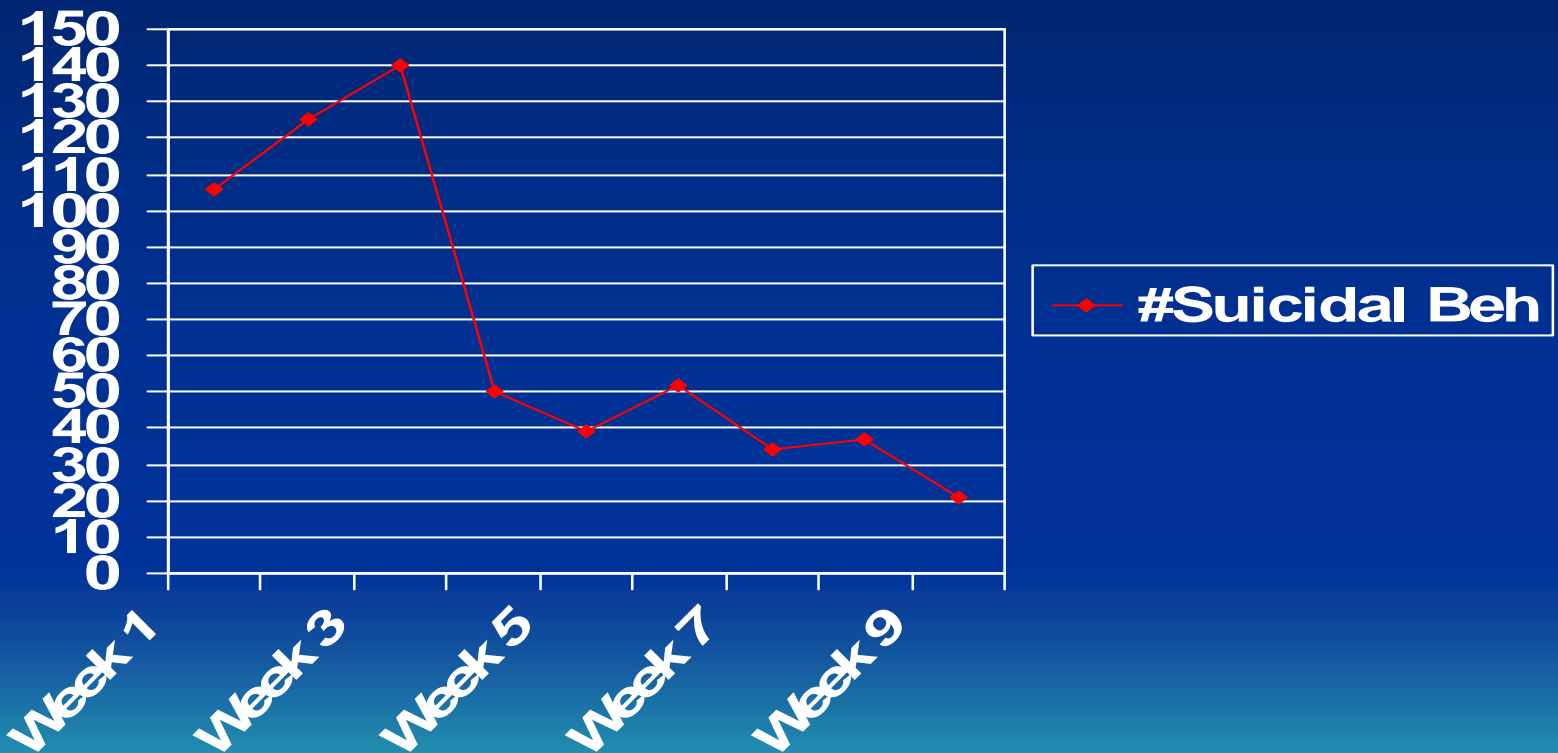
Drill Sergeant Observations

- Trainees are not prepared for the stress or reality of basic training
 - Many have the notion of a “killing machine” Soldier or they are naïve about the mental and physical stamina necessary to succeed
- The stress of BCT is the closest we can create without being in actual combat environment
- Trainees need to have mental toughness and say to themselves they’re not going to quit

“ Since the beginning of our introduction to the Army, stress has always been there. It started with reception. We received many shots which were painful. Afterwards came the shake downs. This frightened many people. For the rest of my training days and nights I spent fighting myself to keep going...I had to push myself to the limit. Part of me wanted to quit so badly, and the rest of me fought to stay on my feet and finish.”



IET Suicidal Behavior by Week Basic Training



Data provided by Installation Suicide POC 2002-2005
TRADOC IET Locations

Management and Treatment of IET Suicidal Behaviors

- Best Course of Action
 - Least restrictive environment
 - Farther you remove recruits from the unit for evaluation and treatment, the harder it is to return them to the unit
 - Use Far Forward Care (Behavioral Health & Chaplains
 - Avoid hospitalization if possible
 - Anecdotal evidence suggests 80% or more of recruits psychiatrically hospitalized did not finish training

Note: Text Book of Military Medicine new volume on Recruit Medicine -- Chapter on “Management of Suicidal Behavior in Recruit Population” (Draft)

Fixing It: A Beginning...

- Move away from interventions that are primarily responses to existing crises
- Move towards supporting Soldiers before the problem behaviors occur



Fixing It: A Beginning...

- Reception week
 - BCT Awareness/ Survival Training
 - Develop capacity to put self in context
 - Accurately predict/anticipate stress and its impact
 - Understand and control maladaptive responses
 - Chaplain's walk-around
 - Stress management /problem solving training
 - Know and utilize available resources (esp. Unit Ministry Teams)
 - Far Forward Mental Health care



Surviving Basic Combat Training

Fort Jackson Pilot

Be Smart - Be Ready

“You can make it!”



Introductions

- Good morning Soldiers, and welcome to TEAM ARMY! My name is Drill Sergeant _____, this is Chaplain _____, and this is Private _____ . You have been through a lot the last week/10 days, but you must always remember that you are now members of the *greatest Army in the world*. But in order to wear that black beret on graduation day, you have a few things that you need to accomplish – and we are here today in order to talk about what will happen to you and your buddies over the next 8 or so weeks.



What you initially may be feeling

- Terribly anxious
- Shock
- Lonely
- Afraid- fearful
 - Of the unknown
 - Everyone watching you
 - You will be the worst trainee
 - You will disappoint your parents, girl/boy friend, buddies
 - You won't make it
 - You are not physically fit to handle it
- Angry
 - You're identified only as a roster number; where is the "thanks"
- Lack of privacy
- Confusion
- Defeat - frustrated

*Bottom line: These are perfectly normal feelings.
Nearly everyone feels this way at first*

Chaplain Comments

- Good morning, my name is Chaplain _____.
- It helps to talk about your fears and frustrations
 - Talk to your Battle Buddy
 - Realize you are not the only one stressed out and afraid
 - Talk to your Drill Sergeants
 - There is nothing they haven't heard
 - Talk to your 1SG or Company Commander
 - Talk to your Battalion Chaplain
 - Talk to your mental health counselor
- (Open comments from the Chaplain)



" There were nights when I heard privates crying in their pillows after "lights out".

Week 9 Soldier – Part 2

What are some mistakes to look out for?

- Buying a padlock that uses keys instead of a combination.
 - Lost the keys – suffer the wrath of a drill instructor cutting off the lock
- Not having a plain nylon, Velcro wallet to protect Military ID.
 - Since you show the ID at every meal, a dirty, ratty ID is easy to spot -- get “dropped”
 - A lost ID can earn severe punishment
- Having stuff stolen either intentionally or accidentally
 - Watch Drill Sergeants reaction when you are two tee-shirts short during an inspection.
- Don't spend all night trying to apply enamel to the boot eyelets, buttons, and rank.
 - If you use a black laundry marker, you can label your stuff and blacken your emblems in a matter of minutes

“You can make it!”

*Initial Entry Training
Suicidal Behaviors
(Gestures & Attempts)*

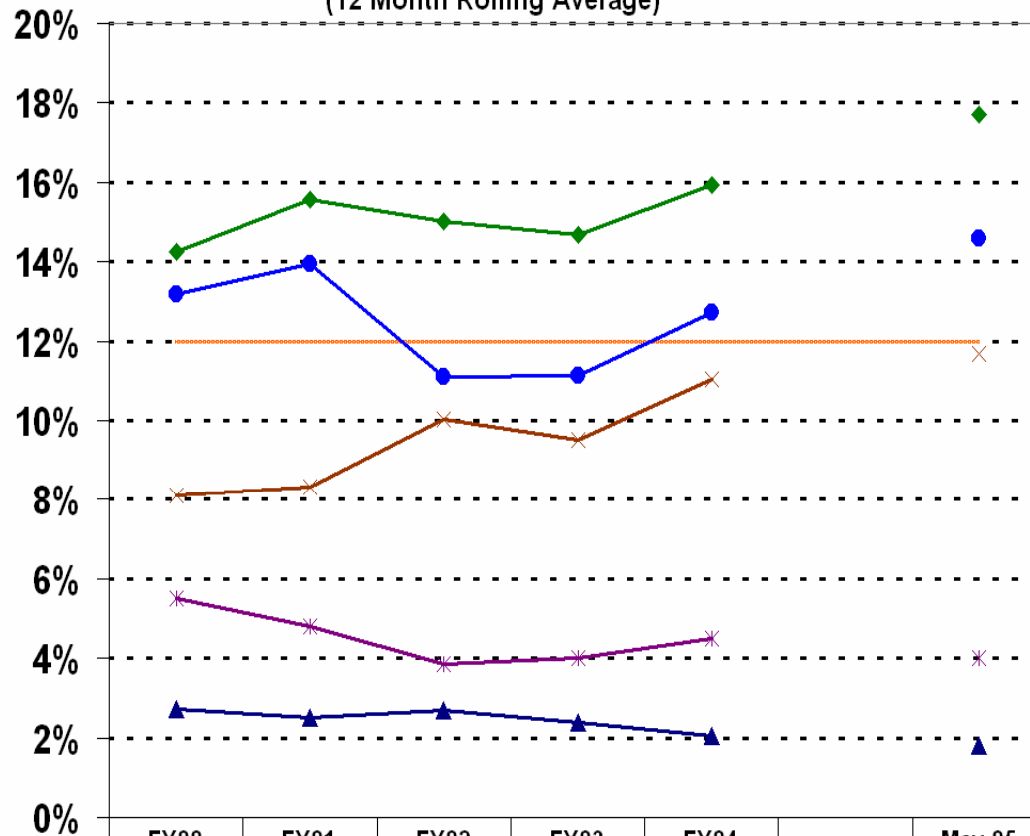


IET Attrition Rate

TRADOC IET ATTRITION

(G-1 Revised Data)

(12 Month Rolling Average)



- May 2005 TRADOC Overall Attrition rate is 17.7%.
- Growth in discharges are occurring in BCT/OSUT.
- Three prominent discharge reasons: Failure to Adapt, EPTS, and Other Medical.

Army Chaplains bring to the table..

- *HELP*
- *HOPE*
- *HEALING*
- *COMFORT*
- *COUNSELING*
- *CONCERN*
- *SPIRITUAL SUPPORT*
- *UNIT VISITATION*
MINISTRY
- *SURVIVOR SUPPORT*



Initial Entry Training Structure

- Reception
- Basic Combat Training
 - Red phase (week 1-3)
 - Blue Phase (week 4-6)
 - White Phase (week 7-9)
 - Graduation
- Advanced Individual Training



A Typical Day

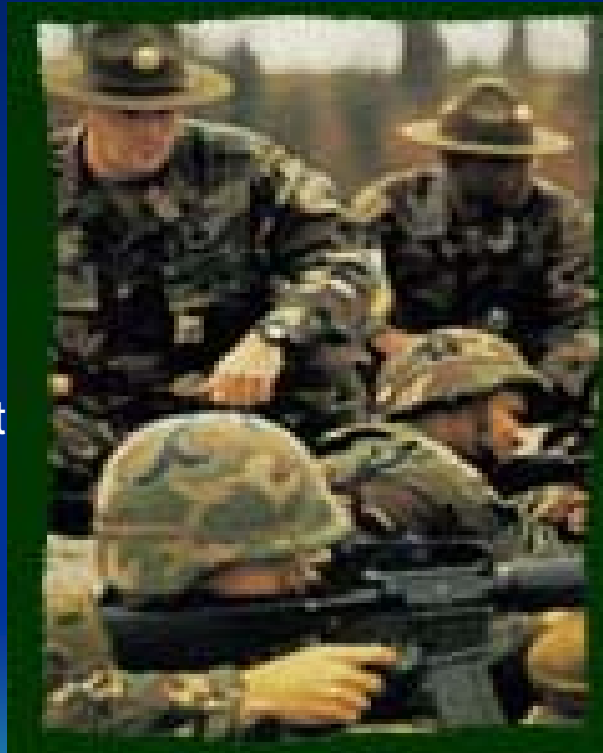
- 0500/5:00 a.m. - Wake up

- 0530/5:30 - Physical Training

- 0700/7:00 - Breakfast

- 0830/8:30 - Training

- 1200/Noon - Lunch



- 1300/1:00 p.m. - Training

- 1700/5:00 - Dinner

- 1800/6:00 - Drill Sergeant time

- 2000/8:00 - Personal Time

- 2100/9:00 - Lights Out

Questions ?

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U.S. Army Training & Doctrine Command

Accident Experience Review

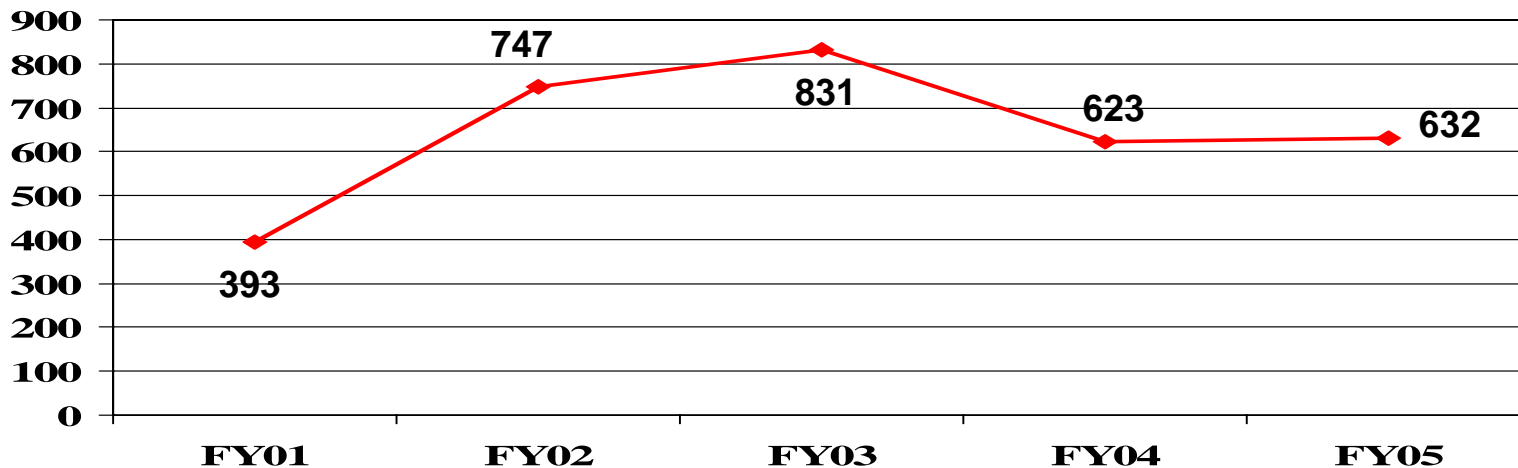
1st – 4th Qtr - FY 05



TRADOC – Where Tomorrow's Victories Begin

TRADOC Performance at a Glance (FY 01 to FY 05)

Class A-D Military Accidents

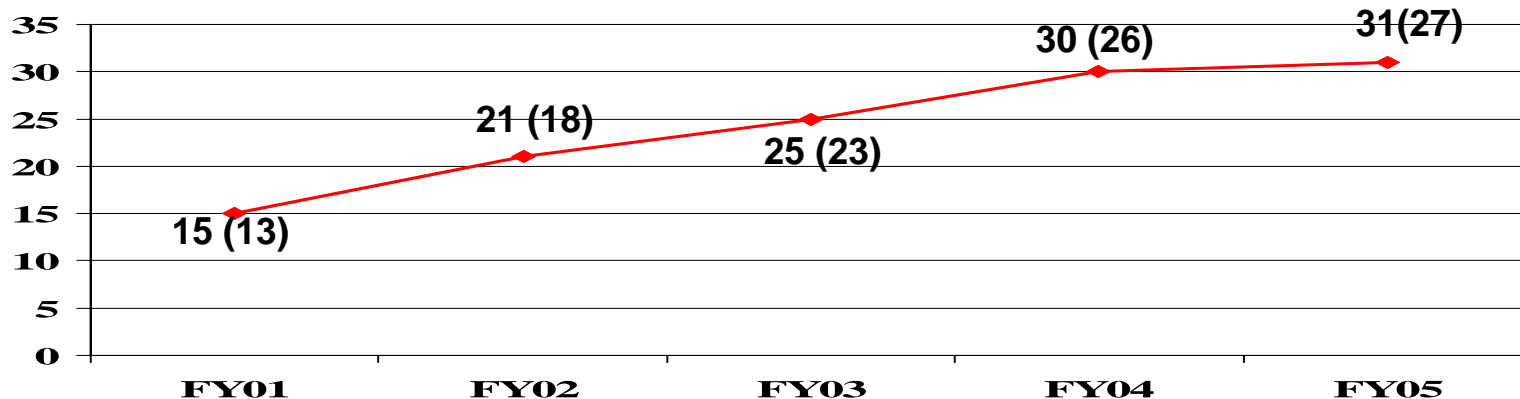


Accidents

1st – 4th Qtr*	
FY04	FY05
623	632*
↑ 1%	

*Up to 60 day
delay in reporting

Class A Accidents (Fatalities)

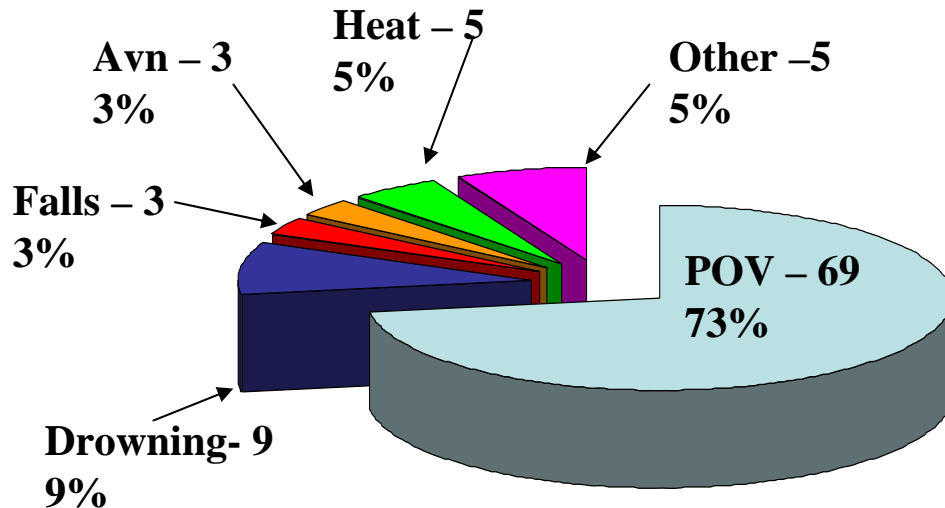


Fatalities

1st – 4th Qtr	
FY04	FY05
26	27
↑ 4%	

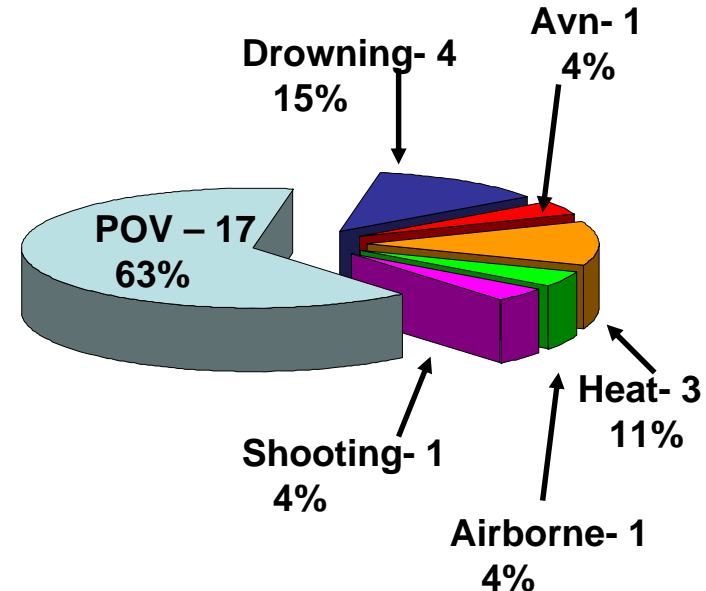
TRADOC Fatality Experience FY 00 to FY 05

FY 00 to 04



Total Fatalities 00-04 – 94
(average – 19/yr)

FY 05

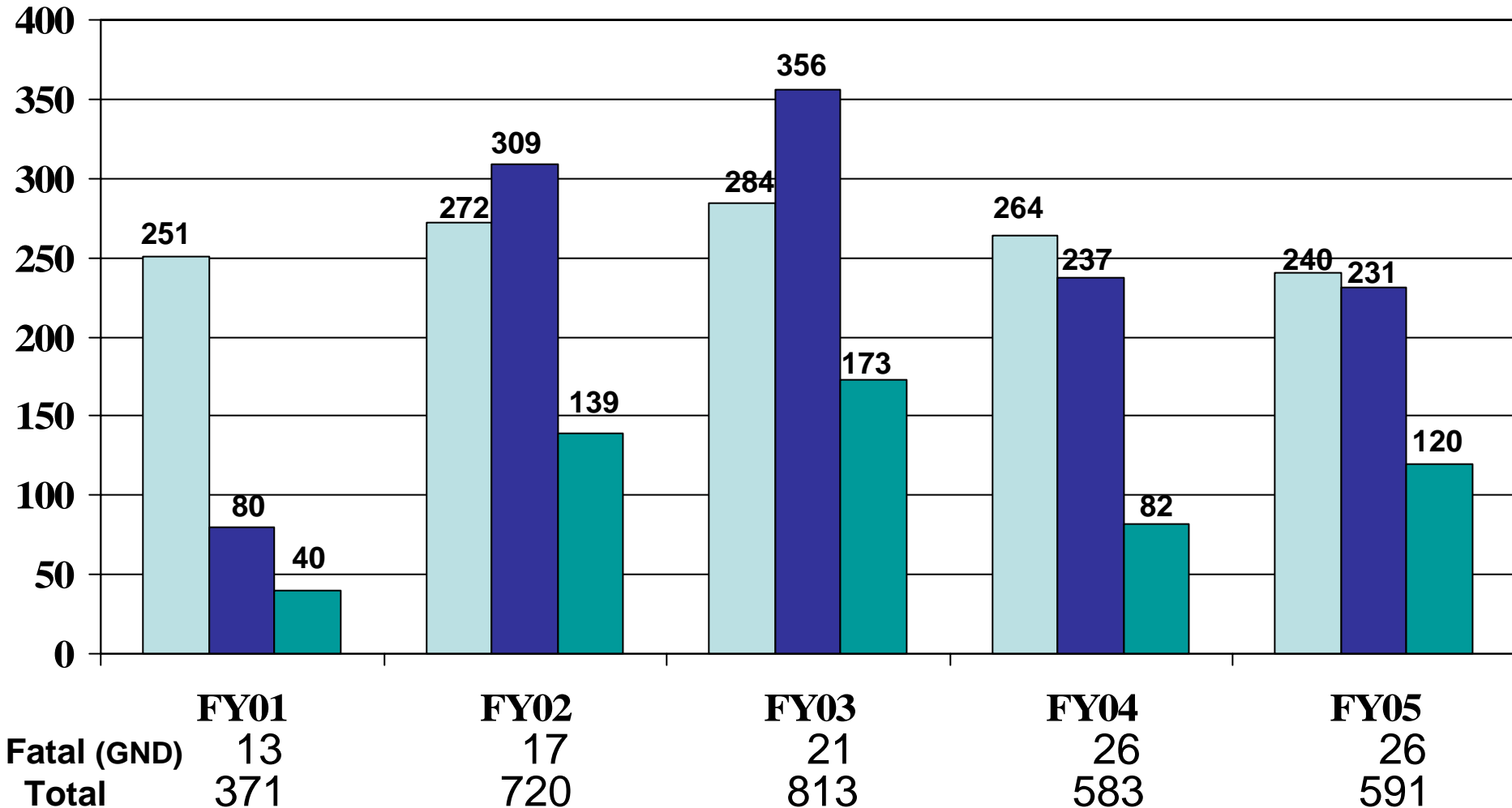


Total Fatalities 05 – 27

Ground Accident Experience

Class A - D FY 01 to FY 05

PI (Personal Injury) AMV/ACV POV

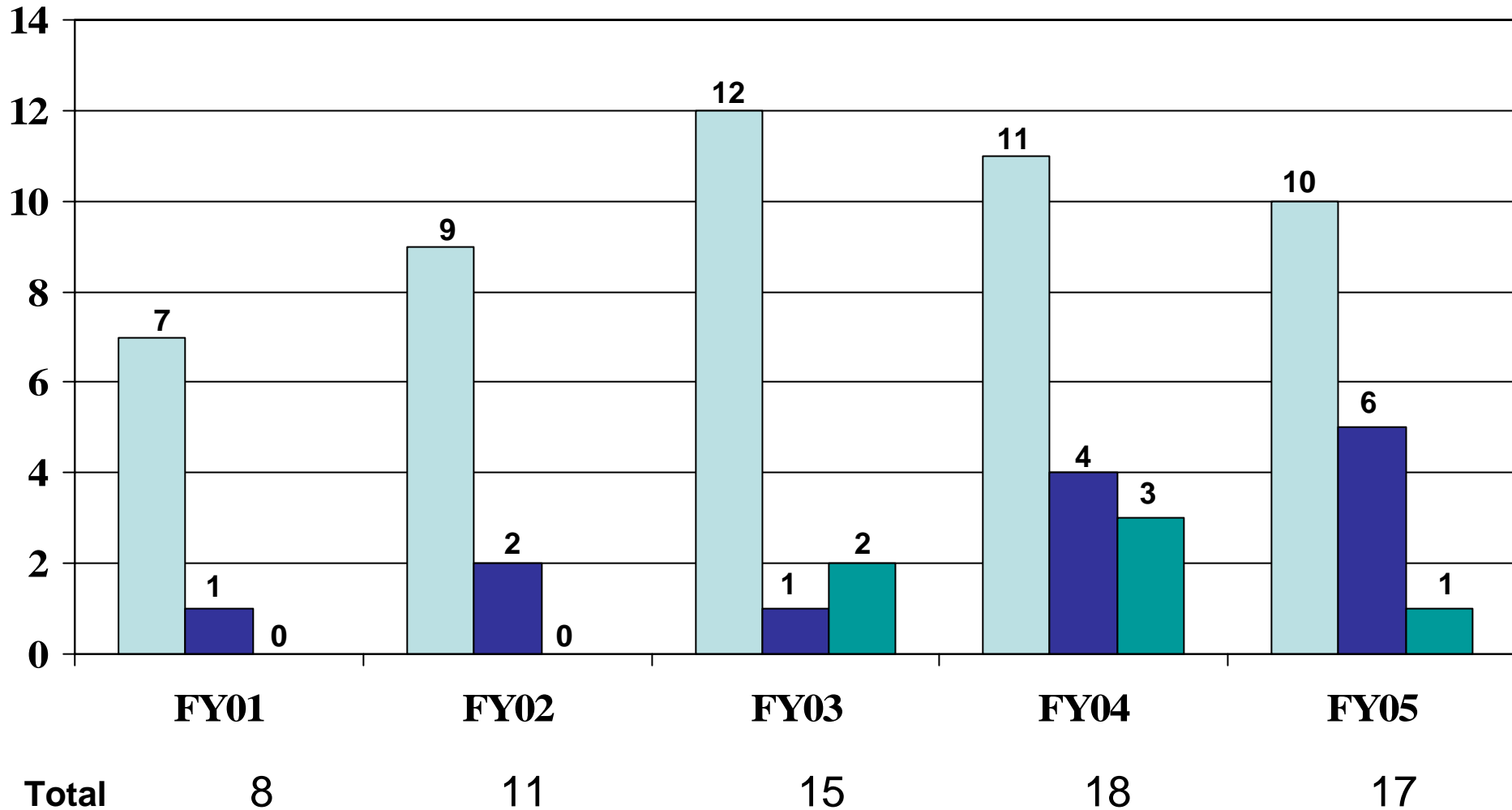


as of 13 Oct 05

POV Related Fatalities

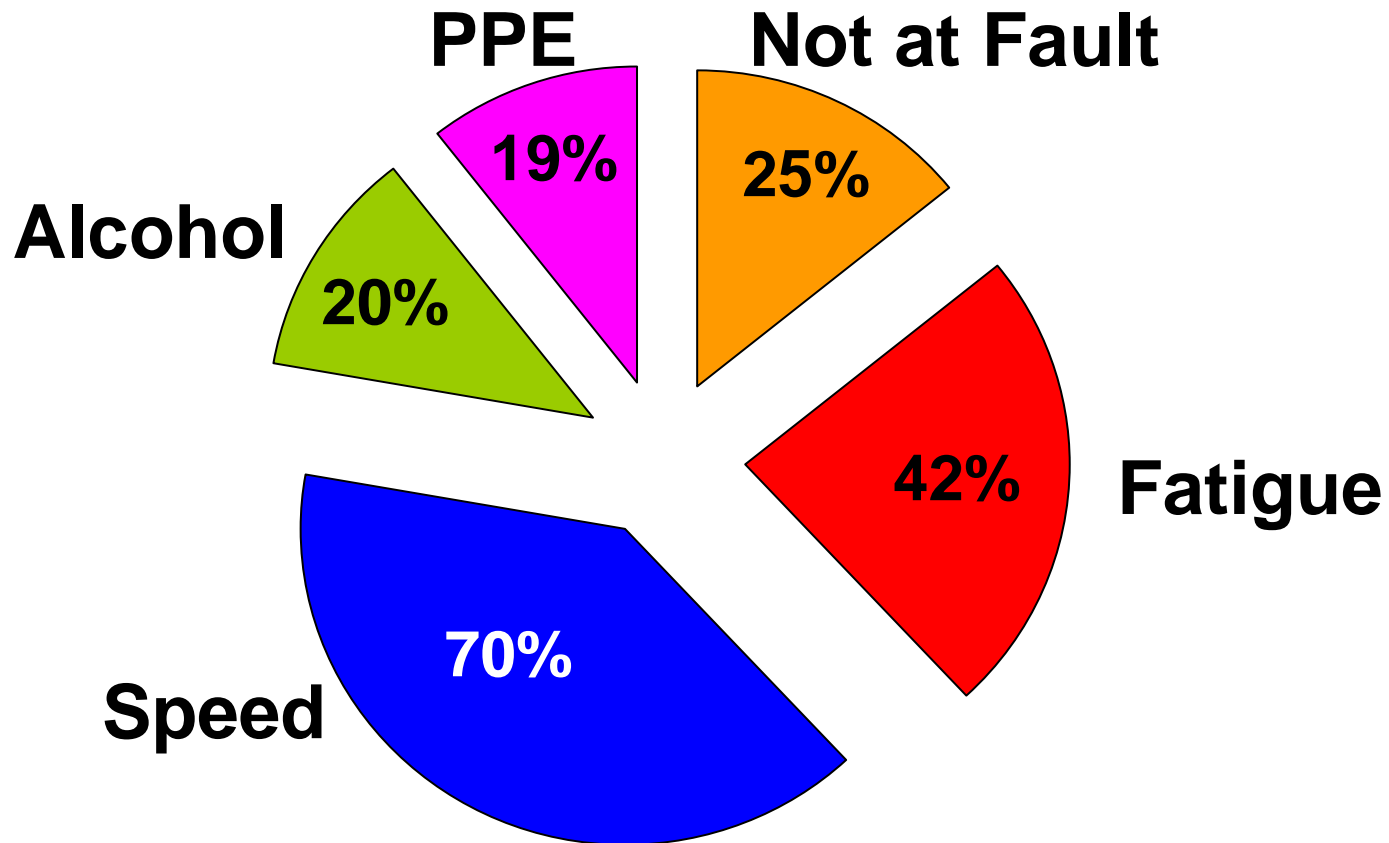
FY 01 to FY 05

■ AUTO (49) ■ MOTORCYCLE (14) ■ PEDESTRIAN/BICYCLE (6)



as of 13 Oct 05

POV Fatal Accident Causation FY 01 to FY 05



Note: *Multiple causations for most accidents.*

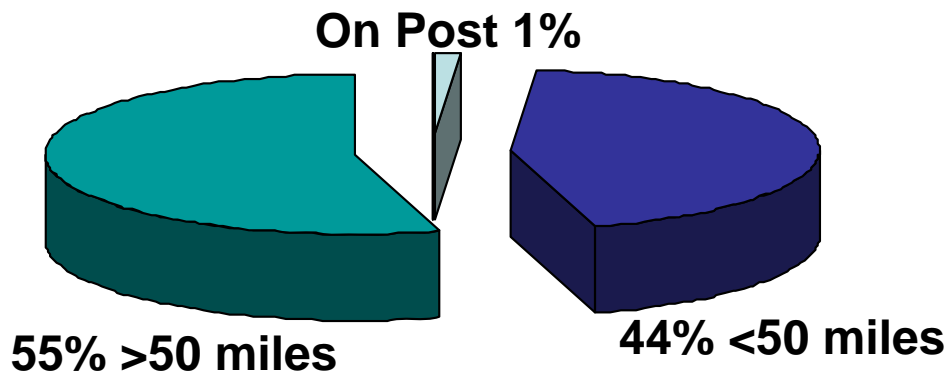
POV Fatality Profile

FY 01 to FY 05

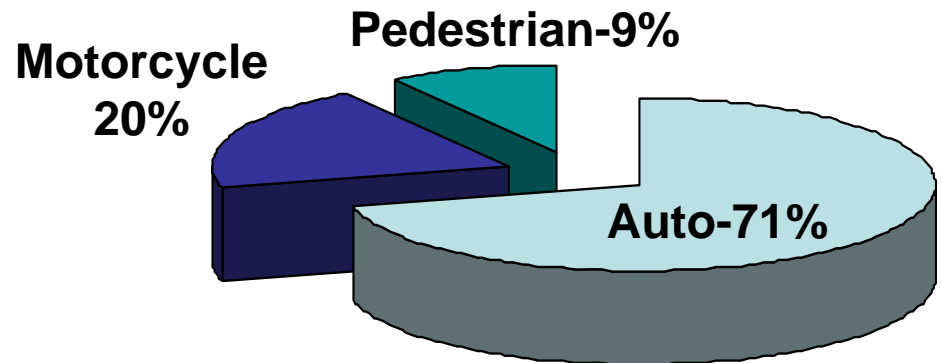
WHO (95% Male)

- Auto: E-1 to E-5
Male (19-26)
Average age: 25
- M/C: E-6 to W-5
Male (28- 45)
Average age: 35

WHERE



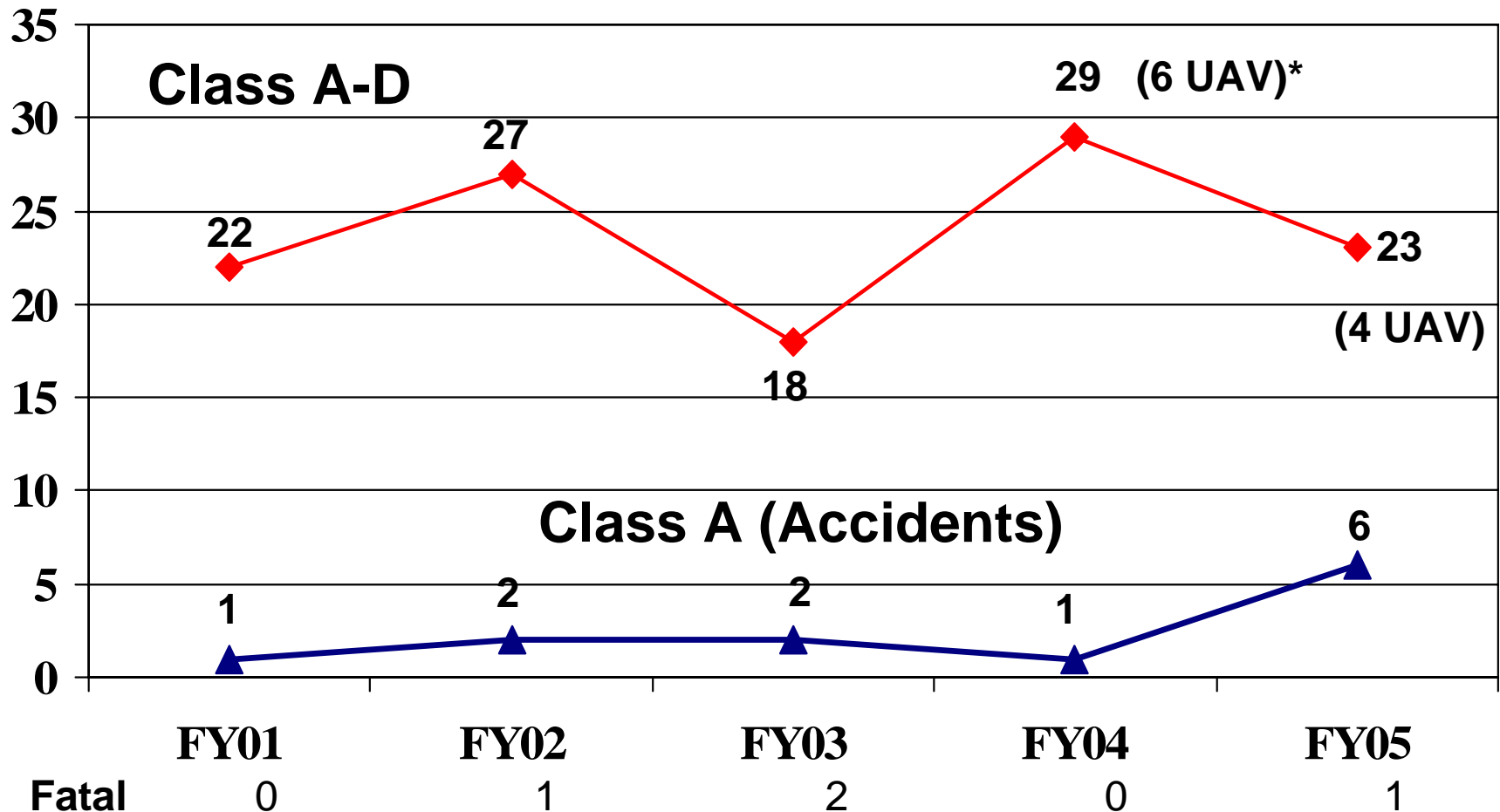
WHAT



WHEN

Friday PM
to
0500 hrs Monday

Aviation Accidents Class A-D FY 01 to FY 05



* UVA accidents classified as aviation accidents effective FY 04

Questions and Comments



Executive Safety Council

**Command Surgeon
COL Greg Jolissaint**

4 November 2005



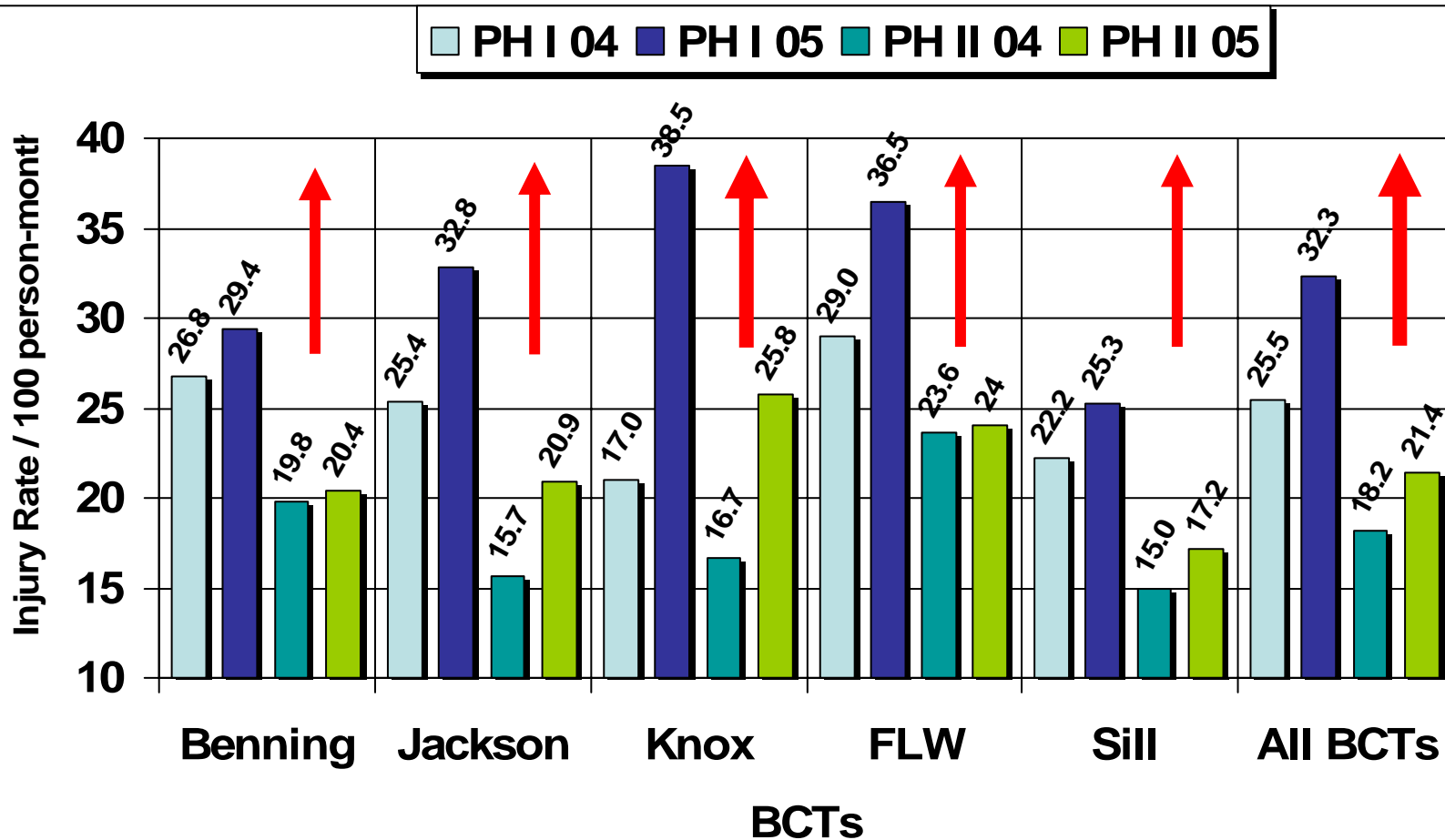
TRADOC – Where Tomorrow's Victories Begin

Agenda

- Training Injuries
- Heat Injuries
- Cold Weather Injury Prevention
- Influenza Immunization Program



Training Injuries Accompanying WTBD, Rigor (Feb – Apr CY04 & CY05 Comparison)



Phase I (PH I) = 0 – 3 Weeks

Phase II (PH II) = 4 – 8 Weeks

Progressive Loading Reduces Stress Related Overuse Injuries

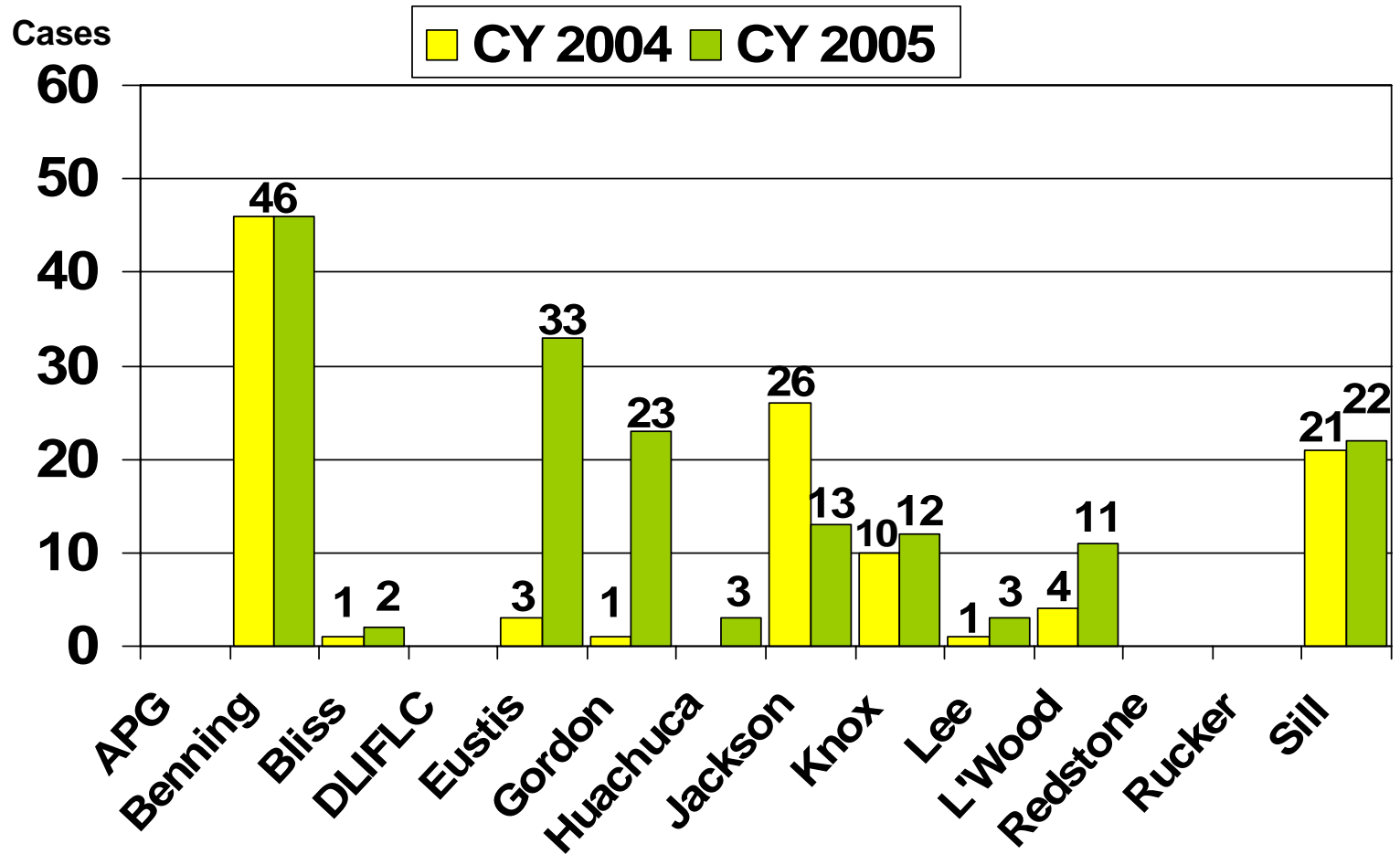
- Week 1 - Weapons Immersion
- Week 2 - add LBE/LBV
- Week 3 - add Kevlar Helmet
- Week 4 - add IBA (without SAPI plates)
- Week 5 - add SAPI Plates to the IBA
- Week 6 - add Ruck Suck

Following this type or a similar type of progression in our IET Soldiers will allow their bones, tendons, ligaments, and muscles to adapt, remodel, strengthen, and avoid preventable injuries. More importantly, following this principle will result in decreased IET retention without lowering our training or performance standards.



TRADOC Heat Injuries in 2004 and 2005

Heat Injury Cases from Reportable Medical
Events System (RMES) Reports



168 Heat Injuries CY 2005

113 Heat Injuries CY 2004

CY Period = Apr – Oct

TRADOC Heat Injuries

(Lessons Learned)

- Empower leaders and battle buddies to monitor and **enforce** hydration and dietary compliance
- **Mental status** of Soldier is most critical piece of information -- if abnormal, **TREAT as Heat Stroke**
- Cooling (**iced sheets**) is most critical intervention
- Iced Sheets -- **repeatedly re-ice/re-cool** during cooling process; if iced sheets used, transport Soldier to ER/Acute Care Clinic
- **Cumulative Heat Stress** (consecutive days of exposure to heat stress) is important → employ heat mitigating measures



Types of Cold Injuries

- Hypothermia
- Frostbite
- Chilblains
- Immersion/Trench Foot
- Dehydration
- Carbon Monoxide Poisoning
- Snow Blindness
- Sunburn



Cold Weather Injuries

Susceptibility Factors

- **Previous cold weather injury**
- **Inadequate nutrition**
- **Alcohol, nicotine use**
- **Dehydration**
- **Overactivity (sweating)**
- **Underactivity**
- **Long exposure to the cold**
- **Sick or injured**
- **Acclimatization**
- **Ethnic/geographic origin**
- **Wind, cold, rain**
- **Age**
- **Discipline and morale**
- **Physical stamina**
- **Inadequate training**
- **Poor clothing and equip**

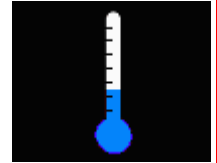


Typical Victim of a Cold Weather Injury

- **Male**
- **E-4 or below**
- **Approximately 20 years old**
- **From a warm climate**
- **Less than 18 months time in service**
- **Uses tobacco, alcohol or medications**
- **Neglects proper foot care**



PREVENTING COLD CASUALTIES



➤ Prior planning and adequate training

➤ 5 steps of cold casualty risk management:

- Identify Hazards
- Assess Hazards
- Develop Controls
- Implement Controls
- Supervise and Evaluate

➤ Cluster of cold casualties increases risk for more

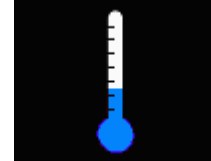


Immersion Foot



➤ Leaders should **repeatedly** ask the following questions concerning the risk for Cold Injury when planning and executing training in cold weather:

Do Soldiers have **adequate shelter/clothing**?



Have Soldiers eaten **warm meals**?

Are Soldiers in contact with **bare metal or POL**?

Are Soldiers in contact with **wet ground**?

Are Soldiers in **wet clothes**?

Can Soldiers **move about** to keep warm?

Do Soldiers have **dry and warm** feet?

Are **battle buddy teams** being maintained?



Valley Forge, DEC 1777



Influenza Immunization Program

- **All** TRADOC Soldiers will receive a Flu Shot or Flu Spray vaccination this season
- MEDDAC Commanders in charge of the installation program
- All IET Soldiers and Cadre should be immunized **prior to EXODUS**



Discussion



TRADOC – *Where Tomorrow's Victories Begin*

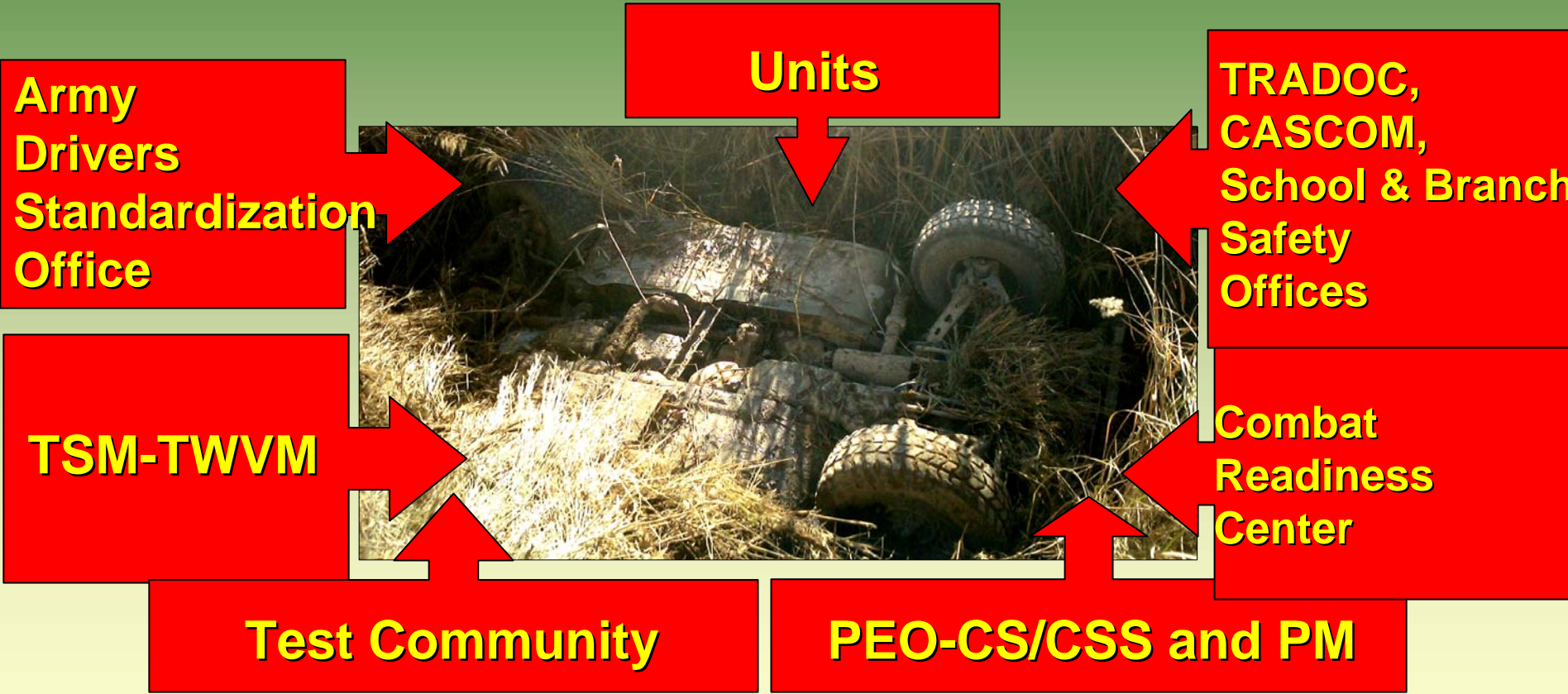


United States Army Transportation School HMMWV Rollover Prevention / Mitigation Initiatives Update

As of 21 September 2005



HMMWV Rollover Prevention / Mitigation Team





OEF / OIF Accident Analysis



Contributing Factors:

- Speed too high for conditions
- Seatbelts not worn
- Combat operations: IED and obstacle avoidance, damage
- Armored vehicle windows restrict view; glass prone to glare
- Handling: M1114 is a much heavier vehicle than M998-12,100 lbs vs. 7700 lbs at max gross wt; ***easily overloaded!***
- Lack of crew intercom equipment
- Fatigue
- Operator training



Transportation School



HMMWV Rollover Prevention / Mitigation Initiatives

GTA 55-03-30, HMMWV Up Armored Emergency Procedures / Performance Measures

Covers preventive measures,

- Rollover drill task steps,
- Water egress drills
- Water rescue / recovery
- MEDEVAC requests
- Accident reporting



Double sided eight panel



Posted on the Reimer Digital Library May 2005

ATSC Distributed over 50K since July 2005
Next batch of 50K due 7 Oct



GTA 55-03-30, HMMWV Up-Armored

Emergency Procedures / Performance Measures



GTA 55-03-030

For Official Use Only

HMMWV UPARMORED Emergency Procedures Performance Measures

WARNING

Never attempt to jump from a rolling vehicle. It may roll over you. Ensure that the vehicle has stopped rolling before exiting. Upon complete evacuation of the crew, vehicle should be inspected for fire hazards such as leaking oil, fuel, ammunition and hydraulic fluid. If hazardous/explosive materials are involved, driver must take actions according to the DD Form 836 accompanying load. Notify rescue personnel and remain at evacuation distance while securing accident site.

20 May 05

PREVENTIVE MEASURES:

Slow Down - Watch for Sharp Curves and Steep Slopes - Curves and slopes generate centrifugal forces that act sideways on the vehicle, increasing the chance of rollover.

Avoid panic-don't jerk the steering wheel: Many rollovers occur when the driver panics / jerks the steering wheel during an emergency. At highway speed, jerking the steering wheel can cause loss of control and the vehicle may slide sideways and roll over.

Know proper maneuvering: If you drive off the roadway, gradually reduce speed. Ease your vehicle back onto the roadway at a safe speed.

Use caution on rural roads/roads with soft or no shoulders: When a vehicle goes off a road, the vehicle can overturn when it strikes a ditch or embankment, or is tripped by soft soil.

Pay attention to vehicle condition, tire pressure and loading:

- Pay particular attention to tire condition and air pressure during PMCS to reduce potential hazards. Worn / improperly inflated tires increase your risk of rollover.

- Don't overload the vehicle. The M1114 payload is 2300 lbs. This includes the passengers, winch, gunners protection kit, spare tire, weapons, and all cargo!

- Keep the Vehicle Center of Gravity Low. Load heavier items low in the vehicle.

Increasing the height of the vehicle's center of gravity increases your risk of roll over.

- **Secure the Load.** Improperly secured loads can shift and become hazards within the vehicle and increase the chance of rollover

- **Trailer Towing.** Vehicles towing trailers are much more prone to roll over, especially in curves and during sudden steering maneuvers, as a result of the exaggerated motion of the trailer. Adjust speed accordingly.

Work As A Team:

Maintain Crew Integrity - train as a team

Communicate with the driver-tell the driver what is to the left, right, rear, and overhead. Your gunner is your eyes and ears! The gunner may be the only crew member capable of seeing around the entire vehicle. Use the vehicle intercom system to pass visual information to the driver, but rehearse shouted voice commands and hand signals in case the intercom is inoperative. Avoid hazards, use a ground guide whenever possible.

Wear seatbelts. Survive the rollover!

Use combat locks-safely - Combat locks help keep the doors closed in a crash, but are a hazard near water! Unlock combat door locks when near water (enemy situation permitting).

Know how to get-out. Rehearse vehicle evacuation as if only one exit is available.

ROLLOVER DRILL TASK STEPS AND PERFORMANCE MEASURES:

NOTE: All personnel in a seat with restraints will wear them!

1. Execute Rollover Drill:

a. Driver--

- (1) Releases the accelerator.
- (2) Yells, "Rollover!"
- (3) Keep hands on the steering wheel tucks head and chin into chest and braces for impact.

b. Vehicle Commander--

- (1) Yells, "Rollover!"
- (2) Pulls Gunner into cab.
- (3) Tucks head and chin into chest and braces for impact.
- (4) Plants feet firmly on the floor while holding onto a stationary object.

c. Gunner--

- (1) Yells, "Rollover!"
- (2) Pushes/pulls self down into vehicle.
- (3) Tucks head and chin into chest and holding onto a stationary object, brace for impact.

ROLLOVER DRILL (CONT):

d. Crew --

- (1) Yells, "Rollover!"
- (2) Pulls Gunner into cab.
- (3) Tucks head and chin into chest and braces for impact.
- (4) Plants feet firmly on the floor while holding onto a stationary object.

2. After the rollover has stopped:

a. Driver--

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Assess injuries.
- (4) Unlocks combat door locks.
- (5) Exits the vehicle with weapon.
- (6) Assists crew to exit.
- (7) Checks for fire.
- (8) Provides security.
- (9) Provides first aid.
- (10) Recovers sensitive items.
- (11) Assists in vehicle recovery.

ROLLOVER DRILL (CONT):

b. Vehicle Commander--

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Assess injuries.
- (4) Unlocks combat door locks.
- (5) Exits the vehicle with weapon.
- (6) Assists crew to exit.
- (7) Establishes security.
- (8) Accounts for sensitive items.
- (9) Reports accident.
- (10) Provides first aid.
- (11) Assists in vehicle recovery.

c. Gunner--

- (1) Disconnects headset.
- (2) Assess injuries.
- (3) Clears and checks weapon for serviceability.
- (4) Exits vehicle with weapon.
- (5) Assists crew to exit.
- (6) Establishes security.
- (7) Recovers sensitive items.
- (8) Provides first aid.
- (9) Assists in vehicle recovery.

ROLLOVER DRILL (CONT):

d. Crew--

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Assess injuries.
- (4) Unlocks combat door locks.
- (5) Exits the vehicle with weapon.
- (6) Assists crew to exit.
- (7) Provides security.
- (8) Provides first aid.
- (9) Recovers sensitive items.
- (10) Assists in vehicle recovery.



MEDEVAC Request:

- Line 1: 6-digit UTM grid location of pick-up site.
- Line 2: Radio frequency, call sign and suffix of requesting personnel.
- Line 3: Number of patients by precedence: Urgent, Priority, and Routine.
Urgent - loss of life or limb within 2 hours. Priority - loss of life or limb within 4 hours. Routine - evacuation within 24 hours.
- Line 4: Special equipment required. As applicable, express either none, hoist, or stokes litter.
- Line 5: # of patients by type (litter / ambulatory).
- Line 6: Security of pick-up site (What possible / known threat is in the area?).
- Line 7: Method of marking pick-up site (near / far recognition devices).
- Line 8: Patient nationality and status (Coalition Military, US Contractor, non-US Contractor, EPW).
- Line 9: NBC Contamination.



GTA 55-03-30, HMMWV Up-Armored Emergency Procedures / Performance Measures



GTA 55-03-030

HMMWV UPARMORED Emergency Procedures Performance Measures

Combat door locks on the M1114 Up armored HMMWV keep the enemy out. When locked they make it extremely difficult for rescuers to enter the vehicle! Commanders should determine when combat locks should be used when conducting operations near bodies of water.

Accident damage may also jam doors, making them impossible to open.

If the doors cannot be opened and the vehicle is in water too deep to allow air in the vehicle, the likelihood of drowning is high.

In this case, rescuers must immediately roll the vehicle on its side using all available means (tow straps, rope, winch cables, etc.) to gain access to the turret.

20 May 05

9.

PREVENTIVE MEASURES:

When in the vicinity of water and tactical conditions permit:

1. Reduce speed & stop vehicle.
2. Inform crew members that you are operating around potential water hazards.
3. Make a Risk Assessment of the terrain and route before proceeding.
4. Maintain orientation by wearing seatbelts.
5. Unlock combat door locks.

WATER EGRESS DRILL TASK STEPS AND PERFORMANCE MEASURES:

1. When water entry is imminent:

a. Driver--

- (1) Releases the accelerator.
- (2) Yells, "WATER!"
- (3) Keep hands on steering wheel with extended and unlocked arms, tucks head and chin into chest and braces for impact.

10.

WATER EGRESS DRILL (CONT):

- (4) Steers vehicle to control entry into the water to prevent rollover.

b. Vehicle Commander--

- (1) Yells, "WATER!"
- (2) Pulls Gunner into cab.
- (3) Tucks head and chin into chest and braces for impact.
- (4) Plants feet firmly on the floor while holding onto a stationary object.

c. Gunner--

- (1) Yells, "WATER!"
- (2) Pushes/pulls self down into vehicle.
- (3) Tucks head and chin into chest and holding onto a stationary object, braces for impact.

d. Crew--

- (1) Yells, "WATER!"
- (2) Pulls Gunner into cab.
- (3) Tucks head and chin into chest and braces for impact.
- (4) Plants feet firmly on the floor while holding onto a stationary object.

11.

WATER EGRESS DRILL (CONT):

2. When the vehicle is stabilized:

a. Driver--

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Exits vehicle.
- (4) Assess injuries.
- (5) Assists crew to exit and secure weapons.
- (6) Decides whether to remove LBE, body armor, and helmet.
- (7) Gets to safest shore.
- (8) Provides security.
- (9) Accounts for crew members.
- (10) Provides first aid.
- (11) Recovers sensitive items.
- (12) Assists in vehicle recovery.

b. Vehicle Commander--

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Exits vehicle.
- (4) Assess injuries.

12.

WATER EGRESS DRILL (CONT):

- (5) Assists crew to exit and secure weapons.
- (6) Decides whether to remove LBE, body armor, and helmet.
- (7) Gets to safest shore.
- (8) Establishes security.
- (9) Accounts for crew members.
- (10) Accounts for sensitive items.
- (11) Reports accident.
- (12) Provides first aid.
- (13) Assists in vehicle recovery.

c. Gunner --

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Exits vehicle.
- (4) Assess injuries.
- (5) Clears and checks weapon for serviceability.
- (6) Decides whether to remove LBE, body armor, and helmet.
- (7) Gets to safest shore.
- (8) Provides security.
- (9) Recovers sensitive items.
- (10) Provides first aid.

13.

WATER EGRESS DRILL (CONT):

- (11) Assists in vehicle recovery.

d. Crew--

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Exits vehicle.
- (4) Assess injuries.
- (5) Assists crew to exit and secure weapons.
- (6) Decides whether to remove LBE, body armor, and helmet.
- (7) Gets to safest shore.
- (8) Provides security.
- (9) Accounts for crew members.
- (10) Provides first aid.
- (11) Recovers weapons, ammunition, and sensitive items.
- (12) Assists in vehicle recovery.

M1114 Data:

Curb Weight: 9800 Lbs / 4447 kg
Payload: 2300 Lbs / 1043 kg
Gross Weight: 12,100 Lbs / 5489 kg
Max Towed Load: 4200 Lbs / 3175 kg

Max Safe Speed depends on surface conditions -- use your head!

14.

WATER RESCUE / RECOVERY:

1. Secure the accident site.
2. Stay in contact with the vehicle, hold onto the vehicle and kick/swim to high point in buddy teams.
3. Rescuers tie a rope / cable to the vehicle to aid in rescue.
4. Open doors and hatches.
5. If doors and hatches are not accessible, rescuers must immediately use all available means to turn the vehicle on its side to gain access to the turret.
6. Seek out the highest point on/in the vehicle.
7. Ensure that all survivors have air and are able to breathe.
8. Check for other injuries and apply first aid.
9. Carefully move injured personnel to the highest point on the vehicle.
10. Remove excess equipment, to include body armor in deep water.
11. Evacuate from vehicle high point to safest location, depending on:
 - enemy situation.
 - water level and flow.
 - water temperature.
 - distance to waters edge.
 - anticipation of rescue.

15.

REPORT THE INCIDENT/ACCIDENT:

1. Who (Unit, Individual)?
2. What (Accident or Combat)?
3. Where (6-digit UTM grid)?
4. How (What caused the rollover, speed, visibility, cause of injuries or deaths)?
5. Follow up initial report ASAP with information regarding:
 - a. Weather conditions.
 - b. Seatbelts worn by each occupant.
 - c. Fatigue / sleep prior to the accident.
 - d. Was the driver able to see the hazard / other vehicle?
 - e. Operator training / experience / license.
6. Complete Accident Report Form (DA Form 285 AGR) and forward to higher HQs.

Information provided by:
U.S. Army Transportation School
Army Driver Standardization Office (ADSO)
705 Read Street
Ft Eustis, VA 23604

16.



Transportation School



HMMWV Rollover Prevention / Mitigation Initiatives

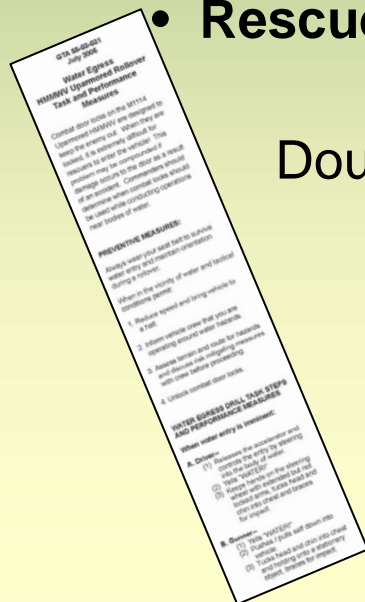
GTA 55-03-31, Water Egress Drill Tasks and Rescue Wrench Procedures

Wallet size version of
GTA 55-03-030 water egress drills;

Includes:

- Water egress drill task steps
- Performance measures
- Rescue wrench procedures

Double sided Z-fold three panel



Posted on the Reimer Digital Library Aug 2005

ATSC Production of 50K due 7 Oct



GTA 55-03-31, Water Egress Drill Tasks and Rescue Wrench Procedures



GTA 55-03-031
July 2005

Water Egress HMMWV Uparmored Rollover Task and Performance Measures

Combat door locks on the M1114 uparmored HMMWV are designed to keep the enemy out. When they are locked, it is extremely difficult for rescuers to enter the vehicle! This problem may be compounded if damage occurs to the door as a result of an accident. Commanders should determine when combat locks should be used while conducting operations near bodies of water.

PREVENTIVE MEASURES:

Always wear your seat belt to survive water entry and maintain orientation during a rollover.

When in the vicinity of water and tactical conditions permit:

1. Reduce speed and bring vehicle to a halt.
2. Inform vehicle crew that you are operating around water hazards.
3. Assess terrain and route for hazards and discuss risk mitigating measures with crew before proceeding.
4. Unlock combat door locks.

WATER EGRESS DRILL TASK STEPS AND PERFORMANCE MEASURES

When water entry is imminent:

A. Driver--

- (1) Releases the accelerator and controls the entry by steering into the body of water.
- (2) Yells "WATER!"
- (3) Keep hands on the steering wheel with extended but not locked arms, tucks head and chin into chest and braces for impact.

B. Gunner--

- (1) Yells "WATER!"
- (2) Pushes / pulls self down into vehicle.
- (3) Tucks head and chin into chest and holding onto a stationary object, braces for impact.



GTA 55-03-31, Water Egress Drill Tasks and Rescue Wrench Procedures Cont



WATER EGRESS DRILL TASK STEPS AND PERFORMANCE MEASURES

When water entry is imminent:
(Continued)

C. All other crew--

- (1) Yells "WATER!"
- (2) Pull the gunner into the cab.
- (3) Tucks head and chin into chest and braces for impact.
- (4) Plants feet firmly on the floor while holding onto a stationary object.

Information provided by:

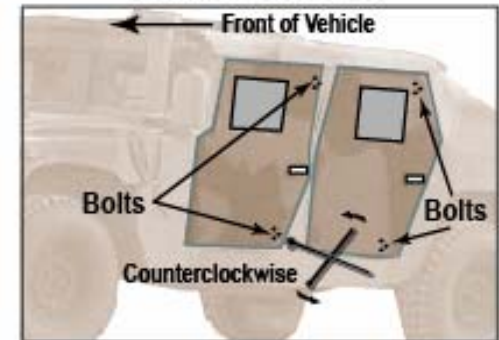
U.S. Army Transportation School
Army Driver Standardization Office (ADSO)
705 Read Street
Ft Eustis, VA 23604

When the vehicle is stabilized:

All crew--

- (1) Disconnects headset.
- (2) Releases seatbelt; uses caution if upside down.
- (3) Exits the vehicle.
- (4) Assess injuries.
- (5) Assists crew to exit and secure weapons.
- (6) Decides to remove personal equipment.
- (7) Gets to safest shore.
- (8) Establishes security.
- (9) Accounts for crew members.
- (10) Provides first aid.
- (11) Recovers weapons, ammunition and sensitive items.
- (12) Assists in vehicle recovery.

RESCUE WRENCH



1. Remove emergency rescue wrench from storage position.
2. Identify door that allow immediate access to conscious occupant.
3. Locate two groups of three bolts at the rear of each door.

Note: One bolt protrudes in each group
4. Remove countersunk bolts first then the protruding one. Complete one group at a time.

Note: If bolt head breaks proceed to the next bolt, the door can still be opened.
5. Open door with handle.
6. Proceed to next door.



Transportation School



HMMWV Rollover Prevention Initiatives Supported by the Transportation School

- **MACOM workshops**
- **Provide input to CRC's Black box testing**
- **DVD Video: Up Armored HMMWV Operations and Training nearing release by CRC which includes:**
 - HMMWV Operations**
 - Composite Risk Management**
 - Characteristics**
 - HMMWV Rollover Drill**



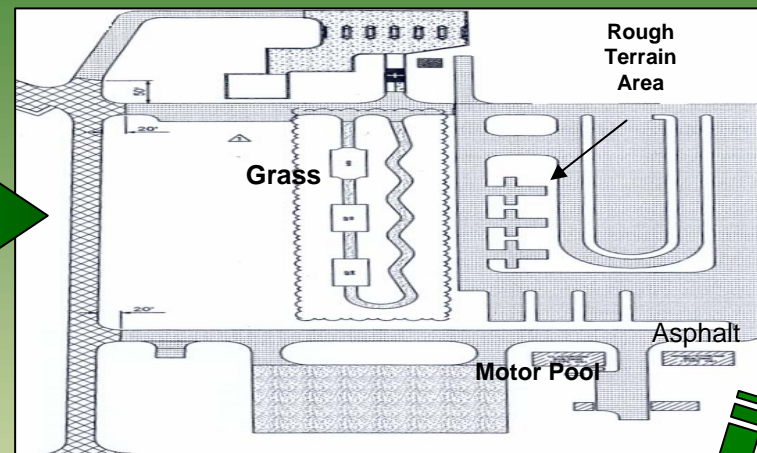
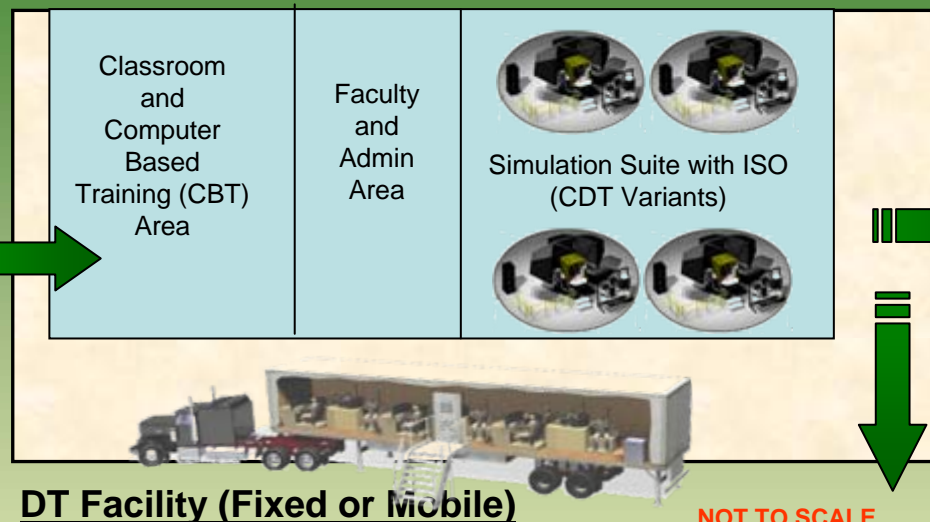
Transportation School Training Circular Updates



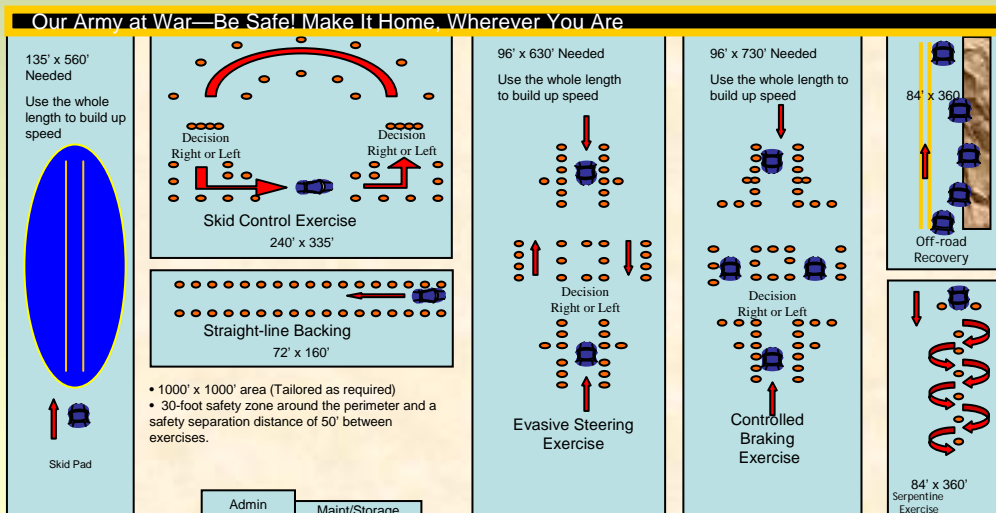
Training Programs	TC#	CD#	TVT#	Revision Timelines
Accident Avoidance	TC 21-305	CDR 55-01	-----	Apr 03
HMMWV	TC 21-305-4	CD 55-18	TVT 55-15	Sept 05
FMTV	TC 21-305-11	CD 55-15	TVT 55-54,55 & 64	Nov 05
HEMTT (8 & 10 ton)	TC 21-305-1	CD 55-16	TVT 55-23,24,25 & 26	Jan 06
5-Ton (M939 Series)	TC 21-305-3	CD 55-21	TVT 55-16	Mar 06
Light Trucks	TC 21-305-7	CD 55-19	----	Jun 06
Medium Trucks	TC 21-305-8	CD 55-22	----	Jul 06
Tractor and Semitrailer	TC 21-305-6	CD 55-20	TVT 55-18	Aug 06
PLS	TC 21-305-10	CD 55-23	TVT 55-36,37 & 63	Oct 06
HETS (M1070/M1000)	TC 21-305-9	CD 55-17	TVT 55-48,49,50 & 160	Nov 06



Army Driving Task Force (ADTF) Initiative – Driving Center of Excellence



HMMWV Range (FLW TA 208)



Advanced Skills Driver Training (ASDT)



Course (Day/Night/NVG/Mission)



84th USARRTC Initiative



Train-the-Trainer (T3) Course for the Up-Armored HMMWV

- The 84th Army Reserve Readiness Training Command (84th ARRTC) developed a five day train-the-trainer course at Fort McCoy, WI to improve training of Up Armored HMMWV operators.
- The first of two pilot courses was conducted 6-10 Sept with a follow-on 26 - 29 Sept 05.
- Pilot courses are being evaluated by TRADOC DCSOPS&T, TRADOC Safety Office, and the U.S. Army Transportation School for potential Army-wide use.





HMMWV Tire pressure testing

- TACOM safety personnel conducted HMMWV tire pressure testing to quantify sensitivity to varying payloads and terrain
- Tests conducted at reduced tire pressure showed reduced handling and stability characteristics, as well as increases in tire temperatures and tire wear.
- HMMWV overload SOUM "Smart Card" released to the field identifying tire pressure for the M998 with perimeter armor kit:
 - 8000-10000 lbs front/rear Tire pressures 33/37 psi
 - 10000 lbs lbs front/rear Tire pressures 33/46 psi
- M1114 has undergone baseline testing on the roadway simulator with and without outriggers. Following baseline testing a 1000 lb weight was attached above the roof and then two iterations run with the low and high tire pressures.
- Steering and handling testing have also been conducted on the baseline M998, followed by roadway simulator testing.



VIC-3 Intercom System

- Designed for the M1114 HMMWV and other wheeled vehicles equipped with weapon systems; Permits communication between gunner in the rear of a vehicle and the driver/ commander.
- Communication identified as high priority by units in AOR.
- 50 kits are in Kuwait
- 100 shipped Sep 05



VIC-3 (LV2) M1114 Kit



PEO CS/CSS and PM



Improved HMMWV Safety Restraint

Procurement will be limited to a 3-point restraint harness that uses the existing restraint anchors and seats to speed fielding/installation.

- Requirements tied to increasing use of seat belts:
 - Ease of entry/egress;
 - Fit 95% male with IBA and combat gear;
 - Single-point quick release;
 - Belts to not snag on gear;
 - Meet FMVSS standards.
- In Theater O/A 26 Oct 05 and start installation 1 Nov 05



**Quick Release
3-Point Harness**

9 Aug



PEO CS/CSS and PM



Fire Suppression Systems

- Working with TARDEC to identify industry leaders.
- Leveraging technology from Stryker (Kidde) and FAASV (Pacific Sci). Will tailor components for M1114.
- Initial requirement for approximately 400 systems
- First 20 Kits in theater 9 Sep 05 and start installation 8 to 12 Sep 05
- Potential for 4-6 month production lead to me





PEO CS/CSS and PM



Safety Upgrade – Gunner's Restraint

- Gunner's make up a high percentage of casualties. Present issue is gunner's being thrown from vehicle during evasive maneuvers, accidents or roll over.
- Focus to prevent Gunner from being thrown from the vehicle during these events.
- Initial focus on M1114 - Adaptable to other systems with gun stations.
- First 100 kits in theater 29 Aug 05 and started installation 1 Sep 05
- Requirements:
 - Ease of use;
 - Fit 95% Male with Gear;



Single Strap



Double Strap



PEO CS/CSS and PM



Roll-over Protection Improvements

- Purpose is to investigate the need for enhancing the structural integrity for increased occupant protection. AoA (M998, Level 2) provides inherent structural Rollover Protection (confirmed in testing), but conflicting views as to whether it is sufficient.
- Pending decision, PM pursued parallel approaches to increase structural integrity:
 - AM General developing modified Upper Body Structure Kit (UBS).
 - TACOM Armor Group investigating strengthened A-pillar as part of AoA.
 - TACOM Armor Group recommendation was to proceed with UBS vs. AoA improvement:
 - AoA installation nearly complete; AoA mod not an effective improvement without major retrofit;
 - A-Pillar modification alone would not provide significant increase in structural integrity.





PEO CS/CSS and PM



Gunner's Station Roll-Over Protection

- Approaches evaluated under Market Survey:
 - Received 9 responses to RDEC query; Concepts include roll-bars/cage, suspension upgrades/limiters, roll indicators, fender/corner markers and tire upgrades.
 - One concept (Remote gunner's station (CROWS)) received in response to Market Survey.
 - Carlson provided two concepts; Pop-up roll-bar (withdrawn due to safety considerations) and pop-up roll-inhibiting extensions.
 - PM/TARDEC developing will continue to investigate additional concepts.
- Recommendation is to investigate roll-over protection afforded by Gunner's Protection Kit (GPK).
 - M&S to determine baseline for roll-over protection levels provided by GPK.
 - Will investigate benefits of strengthening GPK structure and/or the addition of roll bars to GPK.
 - Roll Tests to be conducted at ATC to verify M&S predictions.



M1114 With Gunner's Protection Kit (GPK) and gun shield



PEO CS/CSS and PM



Single Movement Combat Lock Release

- Coordinated with Combat Readiness Center (USACRC)
- Allows doors to be opened with single action; current configuration has separate latches for vehicle and armored doors.
- New production and retrofit / field kits being developed.
- Hardware available Aug 05.



**Single Movement
Combat Lock**

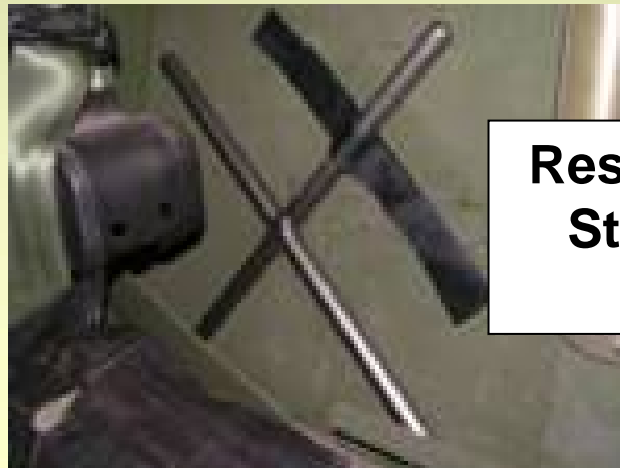


PEO CS/CSS and PM



UAH Emergency Rescue/Egress

- External Combat Lock Access - 1/2" socket hand wrench to open combat locks.
- Coordinated with Combat Readiness Center (USACRC)
- Used to remove Blast Lock Pivots; 45 seconds to remove locks on one door.
- 10,000 on contract.
- First units shipped to AOR on 13 May.
- Shipping completed 2 Jun 05
- 1,800 additional wrenches procured in July for vehicles with Add-on-Armor (AoA)



**Rescue Wrench
Stowed on C
Partition**



Comments / Guidance

Commanders & Commandants Comments



Off - Site Participants

Aberdeen Proving Grounds – USAOC&S

Combined Arms Center – CAC

Carlisle Barracks

Defense Language Institute – DLI

Fort Benning

Fort Bliss

Fort Eustis

Fort Gordon

Fort Huachuca

Fort Jackson

Soldier Support Institute - SSI

Fort Knox

Fort Lee

Fort Leonard Wood

Fort Rucker

Fort Sill

Redstone Arsenal

U.S. Army Recruiting Cmd

Combined Arms Support Cmd



LTG Jones'

Closing Comments

